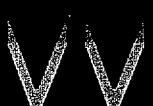


CHAPTER SIX

Environmental Review



CHAPTER SIX - ENVIRONMENTAL REVIEW

INTRODUCTION

The purpose of this Environmental Review is to provide an overview of potential impacts to environmental resources that could result from the proposed airport development program at the Cochise County Airport in Willcox, Arizona.

This Environmental Review has been prepared in accordance with Order 5050.4A, *Airport Environment Handbook* which provides instructions and guidance for addressing the environmental resources as required by the National Environmental Policy Act (NEPA) of 1969, and other laws as applicable.

ENVIRONMENTAL CONSEQUENCES - SPECIFIC IMPACT CATEGORIES

Noise

Noise exposure from aircraft is often the most objectionable interference of the airport with the surrounding environment. Based on FAA Order 5050.4A, Paragraph 47(e)(1), "no noise analysis is needed for proposals involving design group I and II airplanes on utility or transport type airports where forecast operations in the period covered by the environmental review do not exceed 90,000 annual adjusted propeller operations or 700 annual adjusted jet operations".

Operations at the Cochise County Airport by the year 2017 are forecast to be 9,680 of which 8,228 (85 percent) are estimated to be performed by single engine aircraft; 1,162 (12%) by multi-engine aircraft and 290 (3%) by multi-engine turbofan aircraft. The forecast of operations is well below the level at which FAA requires additional noise analysis.

Compatible Land Use

The compatibility of existing and planned land uses in the vicinity of an airport is normally associated with the extent of noise impacts related to airport operations. Aircraft operations are not high enough to produce a 65 DNL contour; therefore, no significant noise impacts are foreseeable during the planning period.

The surrounding unincorporated area adjacent to the airport is zoned for RU-4 (residential with a four acre minimum lot size) and a small area as TR-36 (36,000 sf. minimum lot size). This level of development should not cause any land use conflicts with the airport due to low amounts of aircraft operations.

In an effort to maintain safety for aircraft and the surrounding environs, land for runway protection zones should be controlled by fee-simple ownership, or at a minimum, acquired in avigation easement beyond Airport Road by the airport sponsor. The crosswind runway RPZ's will be contained within the existing property boundary.

Social Impacts

Primary social impacts are associated with relocation or other community disruptions which may be caused by the development of an airport. The key induced, or secondary impacts, include shifts in patterns of population movement and growth, public service demands, and changes in business and economic activity to the extent influenced by airport development. FAA Order 5050.4A, Paragraph 47(e)(4), states that "induced social impacts will normally not be significant except where there are also significant impacts in other categories, especially noise, land use or direct social impacts." No significant negative social impacts are anticipated form future.

Induced Social Impacts

The improvement of airfield and terminal area facilities creates the potential for direct and indirect social impacts in the local community. The airport will offer alternative capabilities, increasing the reliability of the airport as a potential destination, with the degree of impacts generally related to the scope of the airport project.

The proposed airport improvements are anticipated to have a beneficial effect on area transportation for both business and general aviation users by promoting and encouraging local business and economic activities. No significant direct or indirect changes, or major increases of public services are expected to occur, and no appreciable change in local population, employment or housing is expected based on the proposed airport development program. The proposed projects are not expected to cause the disruption of established communities, and will therefore cause no principal negative social impacts. No induced or secondary socio-economic impacts are expected from the development of the Cochise County Airport.

Air Quality

Airports must comply with federal and state regulations which set air quality standards for certain airborne pollutants including ozone, carbon monoxide, nitrogen, dioxide, sulfur dioxide and suspended particles. Determination of the need for an air quality analysis is based on the ultimate forecast level of operations as stated in FAA Order 5050.4A, Paragraph (e)(5). The Order states that no air quality analysis is needed when the proposed project is a general aviation airport with less than 180,000 operations forecast annually. No further air quality analysis is necessary since the forecast levels are indicated at 9,680.

Water Quality

FAA Order 5050.4A requires a water quality certification for approval of an application project including a new airport location, a major runway extension, or major runway relocation. Water impacts from airport construction for on and off-airport water quality are usually in the form of nonpoint source pollution or surface runoff, construction alterations in natural drainage patterns, disturbance of wetland habitat, discharge from certain types of industrial sites, and storage of petroleum and pesticide products.

No special erosion water problems are anticipated at Cochise County Airport during or after construction activities, with minor water quality impacts avoided by design measures, construction controls and management plans. Permits and certificates will be obtained for the airport sponsor by the contractor prior to construction. Certification is given if the activity complies with surface water quality standards or if a variance is issued. No construction permit difficulty is expected.

The Cochise County Airport is considered an industrial activity which will require a National Pollution Discharge Elimination System (NPDES) Permit for the discharge of storm water from activities conducted on airport property. Potential sources of nonpoint pollutants at general aviation airports, typically include erosion from construction activities, aircraft lubricants, fuel, agricultural chemicals and pesticides, and the potential for painting and deicing chemicals.

Fuel Storage: The forecast of activity indicates the airport would maintain one (1) 10,000 gallon 100LL tank, and one (1) 10,000 gallon capacity JetA fuel storage tank. Additional fuel storage capacity could occur late in the planning period if needed. The fuel system at Cochise County Airport was installed in 1968. The Arizona Department of Environmental Quality tested the tanks and found that there were no leaks. However, all underground

storage tanks installed prior to 1989 will need to have spill, overfill and corrosion protection by December 22, 1998. Federal Environmental Protection Agency require this action to be taken or the tanks must closed or replaced. The tanks at the airport do not have these necessary protection devices.

Section 4(f) Land

FAA Order 5050.4A, Paragraph (e)(7) requires that activities which require the use of "...any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state or local significance..." shall not be approved unless it can be shown that no reasonable alternative exists and all possible mitigation measures will be taken. No Section 4(f) lands are located in the immediate airport vicinity and will therefore not be adversely affected by the proposed development program.

Historic, Architectural, Archeological and Cultural Resources

The National Historic Preservation Act of 1966 and Archeological and Historic Preservation Act of 1974 address cultural resources and the thresholds for cultural and historic properties. As described in FAA Order 5050.4A, Paragraph (e)(8), a review of the National Register of Historic Places is necessary to identify any state historic or archeological sites in the airport project area.

The State Historical Preservation Department determined that there are no archaeological sites or cultural resources identified within the airport area but the area has not been systematically surveyed. It is recommended that projects that entail ground disturbing activity should be surveyed by a qualified archaeologist.

Although all construction activities are expected to occur on existing airport property if cultural remains are encountered during construction, work must cease in the immediate area and federal regulations pertaining to emergency discovery situations must be followed. Work can continue in the project area where no cultural materials are present. The Arizona State Historical Preservation Office, ADOT Department of Aviation and the FAA Regional Airports Division must be notified for evaluation of the situation by a qualified professional.

Biotic Communities

Consideration of endangered and threatened species is required under the Endangered Species Act of 1973 to determine potential biotic impacts on wildlife resources from the proposed construction project.

The United States Fish & Wildlife Service (USFWS) was contacted regarding potential impacts to the population and location of wildlife, waterfowl resources and aquatic life in the airport vicinity. The USFWS provided a list of endangered species that could be located in the area. If and when a major project occurs, (as determined by FAA Order 5050.4a) a site specific determination may need to be completed prior to construction. The species list is shown in the appendix. Other agencies to be contacted for further review include the Arizona Game and Fish Department and the Arizona Department of Agriculture.

Biotic Communities are not anticipated to be impacted by the proposed airport construction projects.

Endangered or Threatened Species

The Endangered Species Act of 1973 protects listed species against killing, harming, harassment or any action that may damage their habitat. FAA Order 5050.4A, Paragraph (e)(10) describes the procedures to determine the impacts on endangered or threatened species.

The United States Fish & Wildlife Service (USFWS), was contacted regarding impacts to threatened or endangered species due to the proposed project. The USFWS provided a list of endangered species that could be located in the area. If and when a major project occurs (as determined by FAA Order 5050.4a) a site specific determination may need to be completed prior to construction.

The species list is shown in the appendix. Other agencies to be contacted for further review include the Arizona Game and Fish Department and the Arizona Department of Agriculture

Threatened and endangered wildlife species are not anticipated to be impacted by the proposed airport construction projects.

Wetlands

A proposed activity is considered to affect wetlands when it involves development in a wetland (hydrophytic vegetation, hydric soils and wetland hydrology), or "dredging, filling, draining, channeling, dividing, impounding" or direct impact of a wetlands area. The Army Corps of Engineers has regulatory jurisdiction over wetlands and waters of the United States pursuant to the provisions of Section 404 of the Clean Water Act (33 USC 1344).

The Army Corps of Engineers was notified concerning the possible impact to wetlands from proposed airport development. The proposed airport activity in this Master Plan does not require a Department of the Army authorization since the proposed activity will not involve excavation or the discharge of dredged or fill material in waters of the United States. However, there are hydric soils at the airport which will require further study if major ground disturbing activities are considered.

Floodplains

Proper consideration is given for the avoidance of airport projects which are directly and indirectly impacted by the inundation of normally dry land areas from the overflow and accumulation of surface waters.

The Cochise County Airport is situated on a relatively flat area. Flood hazard area maps prepared by the U.S. Department of Agriculture included in the appendix) shows portions of the Cochise County Airport is located within the limits of the 100-year base floodplain.

Based on aerial photography and site visits, drainage patterns at the airport have been diverted to a series of channels which lead to a drainage basin on the airport site. These drainage improvements at the airport protect the airport from flooding and do not contribute downstream run off because water falling on the airport is contained in the drainage basin to be absorbed or evaporate.

Coastal Zone Management Program

This impact category refers to the Coastal Management Zone Act. While taken into consideration, coastal zone management is not applicable to the proposed airport project.

Coastal Barriers

This impact category refers to the Coastal Barriers Resources Act of 1982. While taken into consideration, coastal barrier impacts are not applicable to the proposed airport project.

Wild and Scenic Rivers

This impact category refers to the Wild and Scenic Rivers Act. There are no rivers listed on the national inventory for the Wild and Scenic Rivers System located in the project area. Therefore, while taken into consideration, this category is not applicable to the proposed airport project.

Prime and Unique Farmland

The Farmland Protection Policy Act (FPPA) addresses the impacts for conversion of farmland to non-agricultural use based upon the proposed airport project. The Natural Resources Conservation Service (NRCS) was contacted to determine whether any land to be taken out of production is protected by the FPPA.

A Farmland Conversion Impact Rating Form (AD-1006) was completed by the NRCS (see appendix). There is no "prime and unique" farmland impacted by the proposed airport projects. Therefore, no further analysis is necessary for the proposed airport projects.

Energy Supply and Natural Resources

Energy requirements associated with the proposed airport project relate to major changes in stationary facilities (airfield lighting and terminal building heating) and change in the movement of air and ground vehicles which could produce a measurable effect on local supplies.

Additional airport development will demand more energy to operate, expand and improve airfield and terminal area facilities, with airfield lighting constituting the primary energy demand. However, no airport equipment is recommended during the forecast period which would result in appreciable changes to energy demands consumed by the Cochise County Airport.

The Cochise County Airport is within a reasonable distance of major transportation corridors and major utilities, and the construction and maintenance will require an expenditure of energy and resources provided locally. Energy consumption in terms of access to the airport and the ability of power companies to serve the airport will, therefore, be minimized.

The proposed airport projects will not cause any major changes in stationary facilities or in movement of air, and will not result in ground vehicles producing measurable effects in the supply of energy or natural resources.

Light Emissions

Light emissions are considered to the extent that any lighting associated with the airport project will create an annoyance among people in the vicinity. The proposed project would require several standard lighting devices during the planning period.

Ultimate airport lighting includes:

Runway End Identifier Lights (REIL): Synchronized flashing lights located laterally on each side of the runway threshold. Provides rapid and positive identification of the approach end of a particular runway. This lighting system is recommended in conjunction with the establishment of runway ends having a non-precision approach procedure.

Visual descent slope indicators (PAPI): A system of colored lights (red and white) used to provide continuous visual descent guidance information along the desired descent path (normally 3 degrees) to the runway threshold.

All lighting will be ground mounted and angled to provide maximum lighting to airport facilities. Night activity at the Cochise County Airport is expected to be minimal. Currently, the runway edge lights and rotating beacon remain on during the night, however, these lights are recommended to be pilot-controlled to reduce energy consumption and the occurrence of light annoyance.

Given the limited occurrences of airport activity during night, and the limited residential development adjacent to the proposed sites, disturbances due to light emissions are expected to be minimal.

Solid Waste Impacts

FAA Order 5200.5, *FAA Guidelines Concerning Sanitary Landfills On or Next To Airports* provides guidelines regarding the establishment, elimination or monitoring of landfills, open dumps, waste disposal sites or similarly tiled facilities on or in the vicinity of airports.

The Cochise County Landfill is located near Bisbee, Arizona and is well beyond 10,000 feet from the closest runway threshold at the Cochise County Airport, therefore, the potential for hazards caused by wildlife is not expected to impact the operational safety of the airport.

The U.S. EPA's Integrated Date Facility-Specific Compliance Profile report indicates there have been no previous inquiries or record of state/local criminal action reported to the Regional Environmental Enforcement Association at the Cochise County Airport.

Construction Impacts

Potential impacts from construction of the proposed project include noise, dust, erosion and storm water runoff upon the surrounding environment. The impacts, however, will be temporarily confined to the construction site during the construction period. FAA Advisory Circular 150/5370-10, *Standards for Specifying Construction of Airports* outlines measures to be employed in order to minimize adverse environmental effects of construction upon the airport site as well as the immediate surrounding area. These specifications will be used during the construction phases to mitigate environmental impacts.

During the construction phase, there would probably be an increase in the amount of surface runoff in a shorter span-of-time causing the potential for increased erosion. FAA Advisory Circular AC-150/5370-10, *Standards for Specifying Construction of Airports* outlines measures to be employed in order to minimize adverse environmental effects of construct upon the airport site as well as the immediate surrounding area. Those specifications will be used during the construction phases to mitigate impacts.

Conclusion

All development items for the Cochise County Airport at Willcox are considered categorically excluded from further environmental action according Federal Aviation Order 5050.4A. Correspondence State and Federal agencies confirm that no significant environmental impact will occur; however, additional review may be necessary regarding wetlands, endangered species, and archeological sites.

AGENCIES CONTACTED

Arizona State Historical Preservation Office*	Phoenix, Arizona
United States Fish and Wildlife Service *	Phoenix, Arizona
United States Army Corps of Engineers *	Phoenix, Missouri
Natural Resources Conservation Service *	Willcox, Arizona
Arizona Department of Environmental Quality *	Phoenix, Arizona

* Received Response